

Zoe Krauss

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EDUCATION	Ph.D. University of Washington, School of Oceanography <i>Marine Geology & Geophysics; Advisor: William S.D. Wilcock</i> M.S. University of Washington, School of Oceanography B. A. Colorado College <i>Physics major: Geophysics emphasis; Magna cum laude; Phi Beta Kappa</i>	<i>Anticipated 2025</i> 2021 2019
PUBLICATIONS	Krauss, Z. , Ni, Y., Henderson, S., Denolle, M. (in review). Seismology in the cloud for template matching and machine-learning earthquake detection. Krauss, Z. , Wilcock, W. S., Heesemann, M., Schlesinger, A., Kukovica, J., & Farrugia, J. J. (2023). A Long-Term Earthquake Catalog for the Endeavour Segment: Constraints on the Extensional Cycle and Evidence for Hydrothermal Venting Supported by Propagating Rifts. <i>Journal of Geophysical Research: Solid Earth</i> , 128(2), e2022JB025662. Krauss, Z. , & Menke, W. (2020). The Northern Gulf Anomaly: P-and S-wave travel time delays illuminate a strong thermal feature beneath the Northern Gulf of Mexico. <i>Earth and Planetary Science Letters</i> , 534, 116102. Almendros, J., et al. (2020). BRAVOSEIS: Geophysical investigation of rifting and volcanism in the Bransfield strait, Antarctica. <i>Journal of South American Earth Sciences</i> 104: 102834. Borella, J., Quigley, M., Krauss, Z. , Lincoln, K., Attanayake, J., Stamp, L., Lanman, H., Levine, S., Hampton, S. & Gravley, D. (2019). Geologic and geomorphic controls on rockfall hazard: how well do past rockfalls predict future distributions?. <i>Natural Hazards and Earth System Sciences</i> , 19(10), 2249-2280.	
WHITE PAPERS	Krauss, Z. , Eilon, Z., Parnell-Turner, R., Janiszewski, H., Worthington, L., Kidiwela, M., & Brunsvik, B. (2021) Call to expand ocean bottom seismograph (OBS) facilities and instrument pool for ambitious Rift2Ridge science. <i>2021 Rift2Ridge Workshop</i> .	
SEMINAR TALKS	<i>Long-term seismic data unlocks the story of a mid-ocean ridge.</i> Ocean Networks Canada Lunch and Learn, general audience. (Invited, 2023) <i>Long-term and real-time seismic monitoring of a mid-ocean ridge.</i> Pacific Geoscience Center-University of Victoria Seminar. (Invited, 2023) <i>Machine-learning-based detection of offshore earthquakes.</i> Data Science Seminar, University of Washington. Recording available on YouTube. (2022) <i>Building and interpreting an earthquake catalog for the Endeavour segment.</i> Seismolunch Seminar and the Marine Geology and Geophysics Seminar, University of Washington, virtual. (2021) <i>Deep structure of the Northern Gulf of Mexico from Seismic Data.</i> USGS Menlo Park and Stanford Reading Group, virtual. (Invited, 2021)	
CONFERENCE PRESENTATIONS	SSA Annual Meeting, San Juan, PR (poster) <i>Constructing Cloud Resources for the Individual Researcher From the Ground Up: An Example of Earthquake Detection in the Cloud</i> AGU Fall Meeting, Chicago, IL (poster) <i>Investigating microearthquake multiplets using ocean bottom seismometers in a mid-ocean ridge hydrothermal field</i>	2023 2022

	NDSEG Fellows Conference, Boston, MA (poster and talk)	2022
	Using real-time offshore seismic observations to understand the seafloor spreading cycle	
	SSA Annual Meeting, Bellevue, WA (poster)	2022
	Long-term Earthquake Catalog for the Endeavour Segment of the Juan De Fuca Ridge Highlights the Influence of Propagating Rifts on Hydrothermal Venting	
	AGU Fall Meeting, virtual (talk)	2021
	Long-term earthquake patterns at the Endeavour Segment, Juan de Fuca Ridge	
	Rift2Ridge Workshop, virtual (lightning talk)	2021
	Lessons from multiple decades of observations on the Endeavour Segment	
	Marine Seismology Symposium, virtual (live short talk)	2021
	Building a Multidecadal Microearthquake Catalog for the Endeavour Segment of the Juan de Fuca Ridge	
AWARDS	NDSEG Conference Exemplary Poster Award	2022
	AGU Outstanding Student Presentation Award (OSPA)	2021
	National Defense Science and Engineering Fellowship (NDSEG)	2020
	NSF GRFP Fellowship	2020
	<i>Declined in favor of the NDSEG</i>	
	ARCS Fellowship, University of Washington	2019
	NSF GRFP Honorable Mention	2019
	Association of Women Geoscientists Outstanding Student Award	2019
	David and Karen Smith Cowperthwaite Award for Excellence in Physics	2019
	<i>Awarded by the Colorado College Physics Department</i>	
COMPUTATIONAL EXPERIENCE	<i>Proficient in Python and Matlab</i>	
	<i>Experience with cloud computing (Azure), Git, Linux systems</i>	
& SUPPORT	University of Washington Azure Cloud Support	2023
	\$5,000 of Azure cloud computing credits to use toward the documentation of time and cost scaling of seismic workflows.	
	University of Washington eScience Cloud ReproHack Week	2022
	Chosen to work alongside Microsoft Azure cloud computing experts to migrate local workflows onto the cloud.	
	University of Washington Azure Cloud Support	2022
	\$20,000 of Azure cloud computing credits to use towards the creation of earthquake catalogs using machine learning.	
	University of Washington eScience Incubator Program	2022
	Accepted to work one-on-one with a professional data scientist for 10 weeks to create a machine-learning-based earthquake catalog curation workflow using cloud computing resources.	
ADDITIONAL ATTENDED MEETINGS	USGS Cascadia Subduction Zone Science Meeting, Seattle, WA	2023
	SZ4D Community Meeting, Houston, TX	2022
	USGS Cascadia Subduction Zone Science Meeting, Seattle, WA	2020

TEACHING AND MENTORSHIP	Data Science in Oceanography Summer Program	2022
	Mentor, University of Washington	
	Prepared and led Python tutorials on introductory seismic analysis	
	Gave introductory lecture to Marine Geology and Geophysics	
	Served as mentor for an undergraduate project	
	OCEAN 201: Intro to Oceanography Lab	2021
	Teaching assistant, University of Washington, virtual due to COVID	
	Prepared lab experiments and reports	
	Graded ~40 lab reports / week	
	Co-led synchronous lab sessions	
FIELD EXPERIENCE	OBS deployment at Axial Seamount, R/V Langseth*	2022
	*Missed due to COVID emergency	
	DAS deployment on OOI cabled network, Pacific City, OR	2021
	OBS Retrieval at Bransfield Strait, Antarctica, R/V Hesperides	2020
	Frontiers Abroad geology field camp, New Zealand	2017